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EXAMINER CORDRAY, DENNIS R				
ART UNIT 1791		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary

Application No.

10/528,392

Applicant(s)

BURCHARD ET AL.

Examiner

DENNIS CORDRAY

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's amendments and arguments, filed 7/21/2008, have overcome the rejections of claims under 35 U.S.C. 112 as presented. Therefore, the rejections have been withdrawn.

Applicant's arguments have been fully considered but they are not persuasive. Applicant argues that the word foil implies a self-supporting layer and cannot refer to a coating applied as an aqueous solution or to a lacquer as taught by the cited prior art. It is noted that the features upon which applicant relies (i.e., self-supporting foil layer) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181,26 USPQ2d 1057 (Fed. Cir. 1993).

A foil can be a thin leaf or sheet of metal or a layer or coating applied to the back of a mirror (see Webster's II New Riverside Dictionary). Plastic foils are also known in the art to be coated on paper in thin layers (see for example Engel, 4850061, col 2, lines 23-26). Absent a specific definition, a paper layer coated with foil, as claimed, is given its broadest possible meaning as a paper having any thin layer of plastic or metal material applied thereto by any means.

The rejections over the cited prior art are maintained, with modifications to incorporate the amended subject matter. In addition, upon further consideration and due to the amendments, new grounds of rejection are made as detailed below.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 3, 5, 11, 12, 14, 15, 17 and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The amended claims recite a foil whereas the originally filed Specification only recites a film. A foil embodies metal foils and plastic foils, thus the claims as amended embody security paper coated on both sides with a metal foil all over, which was not described in the specification. There is nothing in the originally filed Specification that would teach one of ordinary skill in the art that a metal foil can be used to coat the paper on both sides all over. The Specification specifically recites on pp 5-6, par 32 that the film is a plastic film, and further recites plastic species suitable for the film. The description of the drawings teach in numerous instances visual features in the paper beneath the film or on the underside of the film (see for instance, p 14, par 90; p 15, pars 94-96; p 16, par 98). Such features would not be usable with a metal foil.

This rejection might be overcome by amending the claims to be within the scope of the Specification and by amending the occurrences of the word "film" within the specification to "plastic foil."

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-13 and 20-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites a substrate largely having a feel and sound of paper. It is not clear how a substrate comprising a paper layer coated with foil on both sides all over can have the feel of paper. The very nature of a foil is very different from paper and it is not understood how it can have the feel of paper. It is also not clear what is meant by the sound of paper. Paper does not emit sounds unless it is rubbed, crinkled or otherwise physically manipulated. Finally, the word largely is a subjective term that is not defined in the instant Specification. The metes and bounds of intended degree of similarity of the claimed invention to paper are not defined sufficiently for one of ordinary skill in the art to determine the scope of the invention.

Claim 12 recites a security feature configured for self authentication. The meaning of self authentication is not clear. Does the paper somehow authenticate itself? Does the paper correct itself if falsified? Is some other meaning intended?

The remaining listed claims ultimately depend from and carry the indefiniteness of Claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 7-10, 13-15, 20 and 22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Howland et al (5868902).

Claims 1, 3, 13-15, 20 and 22: Howland et al discloses a security paper and method of making the paper, the method comprising producing the paper in a paper machine, drying the paper and then coating the paper on both surfaces with a coating containing polyurethane (Abs; col 2, lines 17-24; col 4, lines 1-5; cols 5-9, Examples). The coating forms a film, or thin layer (or foil), that increases the soil resistance, adhesion of print and the embossing of intaglio printing on the paper as well as providing security features. In some embodiments, the coating comprises an iridescent, phosphorescent or fluorescent pigment or magnetic particles as security features (col 3, lines 32-61). In other embodiments, a foil, hologram or kinogram is affixed to the paper

(inherently on the film) after it is made and coated, either before or after printing (Claims 1, 16 and 17). Any paper can be folded or creased, thus the paper is foldable and creasable. The paper can be a banknote (col 5, line 10).

Since the structure disclosed by Howland et al is substantially the same as the claimed structure, a paper having a foil coating on both sides, the paper can have the feel and sound of paper or, at least obtaining the feel and sound of paper would have been obvious to one of ordinary skill in the art. Where the claimed and prior art apparatus or product are identical or substantially identical in structure or composition, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). In other words, when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent.

Claim 7: The paper is made from natural and/or synthetic fibers (col 4, lines 6-7).

Claims 2, 8-10: The paper layer comprises a security feature, such as a watermark and/or embedded or windowed security thread which incorporates visual or covert security elements (col 4, lines 16-19). The paper layer is interrupted where the embedded thread or window occurs.

5. Claims 4-6, 16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howland et al (5868902) as evidenced by Haylock (Paper, Its making, merchenting and usage).

Claims 4 and 16: The paper can be printed via intaglio printing (col 4, lines 53-54; cols 5-9, Examples). Although not explicitly disclosed, printing images would have been obvious to one of ordinary skill in the art as functionally equivalent options. Visual and covert images have been printed on banknotes and checks for decades.

Claim 5: The film layers on opposite sides of the paper would obviously have different strains as the paper is folded, creased or deformed in any way from a flat configuration.

Claims 6 and 21: Cotton would have been obvious to one of ordinary skill in the art as a typical source of natural annual fibers (if evidence is needed, see Haylock, p 22).

6. Claims 5, 11, 12 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howland et al in view of Hoeppner et al (US 2002/0022112).

Howland et al does not disclose extrusion or cold lamination of a film. Howland et al also does not disclose that security features are in register with one another.

Hoeppner et al discloses a multilayer security paper and process for making, the process comprising printing a paper on one or both sides, then extruding a plastic film layer to one or both sides of the paper. The extruded film comprises laser active pigments that permit subsequent personalization with a laser. The paper thus coated can be printed and/or embossed with various additional security features, and further marked, engraved or perforated using a laser (Abs; p 1, pars 14 and 16; p 3, pars 40-45). The coated and printed papers can be coated with an adhesive and further

laminated with an upper and lower covering film, the surface of which can be embossed and/or printed with security colors (p 3, pars 46-49). Additional films can be laminated thereon (p 3, pars 50 and 51). Heat is not required, thus the films are cold-laminated. The different layers have different properties, such as being doped, being sensitive to laser light, having integrated security features or materials, etc. (p 2, par 29).

Hoeppner et al discloses advantages of the extrusion and lamination processes that include accurate register of the various security features in the layers (p 1, par 13; p 2, pars 22-24; p 3, par 54). Some security features can be lasered into any desired layer. The paper is thus configured for self authentication as the security features in the layers complement one another.

Hoeppner et al discloses that the process can be used to produce value documents and other security papers. The carrier paper (paper layer) can comprise various security features, such as threads, holograms, etc. (p 1, par 4). Banknotes would have been obvious as a well known value documents.

The art of Howland et al, Hoeppner et al and the instant invention is analogous as pertaining to the manufacture of multilayered security papers. Absent convincing evidence of unexpected properties derived therefrom, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply a plastic layer to the paper layer of Howland et al in view of Hoeppner et al by extrusion or by cold lamination using an adhesive as well known and functionally equivalent options that provide accurately registered layers in which the security features are in register with one another. The motivation to register security features would have been to provide

products consistent in appearance and easily identified but which are difficult to forge due to multiple security features. Since the laminated layers have different properties, they would obviously have different strain properties. Absent convincing evidence of unexpected properties derived therefrom, using a water-soluble adhesive would have been obvious as a functionally equivalent option.

7. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howland et al in view of Nigam (US 2003/0059636).

Howland et al does not disclose polyamide fibers.

Nigam discloses that synthetic fibers used to make printing papers include polyamide, polyesters, polyethylene and polyacrylic fibers (Abs; p 2, par 18).

The art of Howland et al, Nigam and the instant invention is analogous as pertaining to the manufacture of printable papers. Absent convincing evidence of unexpected properties derived therefrom, it would have been obvious to one of ordinary skill in the art at the time of the invention use polyamide fibers in the paper layer of Howland et al in view of Hoeppner et al well known and functionally equivalent synthetic fibers.

8. Claims 1, 3, 5, 8-10 and 13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Patzold et al (4455359).

Patzold et al discloses a tamper proof document comprising an information carrier, which can be a paper layer, and laminated on both sides to a transparent

polymeric foil by means of an adhesive layer (Abs; col 1, lines 1-15 and 61-65; col 3, lines 31-45; col 4, lines 4-8). The document has security features in the foil and/or in the paper layer, such as printed images, writing, embossing, watermarks (in the paper layer), magnetically, optically readable data, etc. (col 4, lines 15-35). Any paper can be folded or creased and the foils on opposing sides of the paper are under different strains when the paper is folded, creased or in any way deformed or, at least, different strains would have been obvious to one of ordinary skill in the art.

Patzold et al discloses that the document is intended to contain information relating to the owner and that such documents may be used for credit or cash free transactions (value document) (col 1, lines 6-15). In any case, making a value document would at least have been obvious to one of ordinary skill in the art.

Since the structure disclosed by Patzold et al is substantially the same as the claimed structure, a paper having a foil layer both sides, the paper can have the feel and sound of paper or, at least obtaining the feel and sound of paper would have been obvious to one of ordinary skill in the art for reasons previously given.

9. Claims 2, 4, 6, 7, 14-16 and 20-22 are rejected under 35 U.S.C. 103(a) as unpatentable over Patzold et al in view of Howland et al and as evidenced by Haylock (Paper, Its making, merchenting and usage).

The disclosures of Patzold et al and Howland et al are used as above.

Claim 2: Patzold et al does not disclose that the paper layer is interrupted. Patzold et al does disclose that other security features visible or invisible can be incorporated into the information carrier (col 4, lines 29-35).

Howland discloses a security feature, such as an embedded or windowed security thread. The paper layer is interrupted where the embedded thread or window occurs.

The art of Patzold et al, Howland et al and the instant invention is analogous as pertaining to security papers having a paper layer and a plastic layer coated on both sides thereof. It would have been obvious to one of ordinary skill in the art to provide security features well known in the art, such as a window aperture in the paper layer, in the document of Patzold et al in view of Howland et al to further identify the document.

Claim 4: Howland et al discloses printing on the paper before or after it is coated with the plastic layer.

Claims 6, 7 and 21: Howland et al discloses using natural and/or synthetic fibers in the paper. It would have been obvious to use such fibers as typical papermaking fibers. Cotton would have been obvious to one of ordinary skill in the art as a typical source of natural annual fibers (if evidence is needed, see Haylock, p 22).

Claims 14-16: Howland et al discloses making the paper in a paper machine, drying the paper and then coating the paper on both surfaces with a plastic layer. Making paper on a paper machine would have been obvious. Intaglio printing is disclosed as a method well known in the prior art and would have been obvious (col 1, lines 34-38).

Claims 20 and 22: Howland et al discloses that the paper can be a banknote. A banknote would have been obvious as a value document well known in the art.

10. Claims 5, 11, 12 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patzold et al in view of Howland et al and further in view of Hoeppner et al.

The disclosures of Patzold et al and Howland et al are used as above.

Patzold et al and Howland et al do not disclose extrusion or cold lamination of a film or that security features are in register with one another.

The disclosure of Hoeppner et al discloses a multilayer security paper and process for making, the process comprising printing a paper on one or both sides, then extruding a plastic film layer to one or both sides of the paper. The extruded film comprises laser active pigments that permit subsequent personalization with a laser. The paper thus coated can be printed and/or embossed with various additional security features, and further marked, engraved or perforated using a laser (Abs; p 1, pars 14 and 16; p 3, pars 40-45). The coated and printed papers can be coated with an adhesive and further laminated with an upper and lower covering film, the surface of which can be embossed and/or printed with security colors (p 3, pars 46-49). Additional films can be laminated thereon (p 3, pars 50 and 51). Heat is not required, thus the films are cold-laminated. The different layers have different properties, such as being doped, being sensitive to laser light, having integrated security features or materials, etc. (p 2, par 29).

Hoeppner et al discloses advantages of the extrusion and lamination processes that include accurate register of the various security features in the layers (p 1, par 13; p 2, pars 22-24; p 3, par 54). Some security features can be lasered into any desired layer. The paper is thus configured for self authentication as the security features in the layers complement one another, thus form self authenticating papers.

Hoeppner et al discloses that the process can be used to produce value documents and other security papers. The carrier paper (paper layer) can comprise various security features, such as threads, holograms, etc. (p 1, par 4). Banknotes would have been obvious as a well known value documents.

The art of Patzold et al , Howland et al, Hoeppner et al and the instant invention is analogous as pertaining to the manufacture of multilayered security papers. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply a plastic layer to the paper layer of Patzold et al in view of Howland et al and further in view of Hoeppner et al by extrusion or by cold lamination using an adhesive as well known and functionally equivalent options that provide accurately registered layers in which the security features are in register with one another (self authenticating). The motivation to register security features would have been to provide products consistent in appearance and easily identified but which are difficult to forge due to multiple security features. Since the laminated layers have different properties, they would obviously have different stretching properties. Absent convincing evidence of unexpected properties derived therefrom, using a water-soluble adhesive would have been obvious as a functionally equivalent option.

11. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Patzold et al in view of Howland et al and further in view of Nigam.

The disclosures of Patzold et al and Howland et al are used as above.

Patzold et al and Howland et al do not disclose polyamide fibers.

Nigam discloses that synthetic fibers used to make printing papers include polyamide, polyesters, polyethylene and polyacrylic fibers (Abs; p 2, par 18).

The art of Patzold et al, Howland et al, Nigam and the instant invention is analogous as pertaining to the manufacture of printable papers. Absent convincing evidence of unexpected properties derived therefrom, it would have been obvious to one of ordinary skill in the art at the time of the invention use polyamide fibers in the paper layer of Patzold et al in view of Howland et al and further in view of Nigam as well known and functionally equivalent synthetic fibers.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Haghiri-Tehrani et al (4506915), Neuhaus et al (4389472), Lob et al (6135503) and Herrmann et al (6428051) disclose other security papers comprising paper layers and plastic foil layers.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DENNIS CORDRAY whose telephone number is (571)272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dennis Cordray/
Examiner, Art Unit 1791

/Eric Hug/
Primary Examiner, Art Unit 1791